

REMARKS

Applicant respectfully requests reconsideration of this application in view of the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in substantially the same order in which the corresponding issues were raised in the Office Action.

Status of the Claims

Claims 1-5 and 7-24 are pending. Claims 2-5 and 11-24 are withdrawn. No claims are currently amended. No claims are canceled. No claims are added. No new matter has been added.

Summary of the Office Action

Claims 1 and 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 1 and 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Claims 1, 7, 8, and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No. 6,204,524 to Rhodes et al. (hereinafter "Rhodes")

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Rhodes in view of U.S. Patent Application No. 5,973,375 to Baukus et al. (hereinafter "Baukus").

Response to Objections

The drawings stand objected to under 37 CFR 1.83(a). In particular, the Office Action states that the drawings must show every feature of the invention specified in the claims. Applicant respectfully traverses this rejection because the identified limitation is already shown. In particular, Figure 10a shows one embodiment in which substantially all of the collecting region 3 is under a polysilicon gate electrode 7. The collecting region 3 is one example of the claimed region for collecting but not storing carriers, and the polysilicon gate electrode 7 is one example of the claimed polysilicon gate electrode.

Similarly, Figure 10b shows another embodiment in which substantially all of the collecting region 3 is under a polysilicon gate electrode 7.

These examples are also supported by the language of the specification. For example, the description of Figure 10a states that the carrier collecting region 3 is under the polysilicon gate 7. Page 15, lines 12-13. The detailed description also provides an alternative explanation which states that the polysilicon gate electrode 7 is above the substrate 1, and in the context of claim 1 the region for collecting but not storing the carriers is “in the substrate.” Page 15, lines 9-11. Additionally, the detailed description of Figure 10b provides another explanation, stated in the negative, which describes the carrier collecting region 3 as being covered by the electrode 7. All of these described embodiments are examples of the recited limitation that substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode. Moreover, these various descriptions demonstrate the breadth of the embodiments shown in Figures 10a and 10b because they employ different language to describe the embodiments from multiple perspectives: the region 3 is under the gate 7, the gate 7 is above the substrate 1, and the region 3 is covered by the gate 7.

Given that Figures 10a and 10b already show pixels in which substantially all of the collecting region 3 is under the polysilicon gate 7, embodiments of the recited limitation of “substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode” are shown in the drawings. Therefore, Applicant respectfully submits that the objection to the drawings is improper and requests that the objection be withdrawn. If, however, the Examiner continues to assert that the recited limitation is somehow not shown in at least Figures 10a and 10b, then Applicant respectfully requests that the Examiner provide a more comprehensive explanation, rather than merely a conclusory statement, of how Figures 10a and 10b purportedly fail to show this limitation.

Response to Rejections under 35 U.S.C. § 112

Claims 1 and 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action states that the limitation “substantially all of the region for collecting but not storing carriers is

under a polysilicon gate electrode” is not described in the specification. However, this rejection is improper because the Office Action does not establish a *prima facie* case to support the lack of written description conclusion.

In rejecting a claim under § 112, first paragraph, as failing to comply with the written description requirement, the Office Action must show express findings of fact to support the lack of written description conclusion. Although the Office Action identifies the claim limitation, the Office Action does not offer any reasoning why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. Therefore, the Office Action does not even satisfy the burden required to establish a *prima facie* rejection based on the written description requirement. Moreover, the original disclosure provides abundant support for the limitation “substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode.” In particular, multiple embodiments are shown in Figures 10a and 10b. Additionally, the detailed description corresponding to Figures 10a and 10b offers further support.

Given that the Office Action fails to establish a *prima facie* rejection based on the written description requirement, and the original disclosure supports the recited claim limitation, Applicant respectfully submits that the rejection based on the written description requirement is improper. Accordingly, Applicant requests that the rejection under 35 U.S.C. § 112, first paragraph, based on the written description requirement be withdrawn. If, however, the Examiner continues to assert that the recited limitation is not supported by the disclosure of the specification, then Applicant respectfully requests that the Examiner clearly explain how the recited limitation is purported outside of the scope of the specification and drawings, either together or independently, as well as the other sections of the application.

Claims 1 and 7-10 also stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In particular, the Office Action states that the limitation “substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode” is not enabled. However, the reasoning provided in the Office Action does not satisfy the Examiner’s burden to establish a reasonable basis

to question the enablement of the claimed subject matter because the Office Action's reasoning is based on a mischaracterization of the recited limitation.

The Office Action misinterprets the claim limitation "substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode" because it inaccurately reasons that such a configuration would preclude the polysilicon gate electrode from being over the at least one planar current flow, carrier transport pathway. In other words, the Office Action interprets the claim limitation to require that only the region for collecting but not storing carriers is under the polysilicon gate electrode. Such an interpretation would impose limitations which are not recited in the claim because the claim does not require that the polysilicon gate electrode is exclusively over the carrier collecting region. Rather, an accurate reading of the recited limitation does not preclude the polysilicon gate electrode from being over other regions or pathways, in addition to the carrier collecting region.

Given that the Office Action's interpretation of the claim limitation is outside of the literal meaning of the claim limitation, the Office Action's assertion that the claims fail to comply with the enablement requirement is not properly supported. Specifically, it would be unreasonable to assert an inaccurate interpretation of the claim limitation in an attempt to question the enablement of that limitation. Therefore, the Office Action does not satisfy the burden to establish a reasonable basis to question the enablement of the claimed subject matter. Accordingly, Applicant respectfully submits that the rejection based on the enablement requirement is improper and requests that the rejection under 35 U.S.C. § 112, first paragraph, based on the enablement requirement be withdrawn.

Response to Rejections under 35 U.S.C. §§ 102(e) and 103(a)

The Office Action rejected claims 1, 7, 8, and 10 under 35 U.S.C. § 102(e) as being anticipated by Rhodes. The Office Action also rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Rhodes in view of Baukus. Applicant respectfully requests withdrawal of these rejections because the cited reference fails to disclose all of the limitations of the claims. In particular, the Office Action fails to address the amendments provided in Applicant's previous response. The Office Action also fails to respond to Applicant's remarks pertaining to the amendments.

Given that Applicant amended the claims, and the present Office Action does not address the amended claims or Applicant's remarks, Applicant respectfully submits that the rejections under 35 U.S.C. §§ 102(e) and 103(a) are moot. Accordingly, Applicant requests that the rejection of claim 1, 7, 8, and 10 under 35 U.S.C. § 102(e) and the rejection of claim 9 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

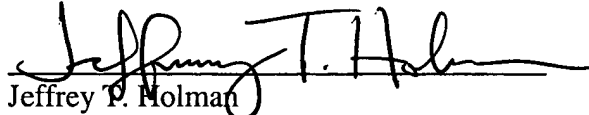
It is respectfully submitted that in view of the remarks set forth herein, the rejections and objections have been overcome. If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Jeffrey Holman at (408) 720-8300.

If there are any additional charges, please charge them to Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 5/5/06



Jeffrey P. Holman
Reg. No. 51,812

12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025-1026
(408) 720-8300